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Overview of the annual international scientific conference on artificial intelligence "AI Global Dimension" 8-9 December 2022

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Abstract. The article provides an overview of the work of the sections of the annual international scientific conference AI Global Dimension on 8-9 December 2022, organized by the Centre for AI MGIMO. The event brought together representatives of science, business and government and contributed to the development of student research and business projects through the AI Showcase technology competition. During the conference experts discussed soft regulation in the field of artificial intelligence, new vectors of digital business development and technological innovations in the university educational process.

Keywords: conference, artificial intelligence, MGIMO, ethics, education, business

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The Russian AI market (hereinafter referred to as "AI") is growing steadily: in 2021 it has reached RUB 550 billion, and in 2022 it has reached RUB 635 billion. AI-based solutions are used in key sectors of the economy, and AI technologies are entering businesses due to increased availability and positive effects of their implementation. However, it should be noted that the development of the AI market brings not only opportunities, but it is also fraught with serious risks for market's participants. This sets the stage for a comprehensive discussion that raises the questions about the ethical approach to technology adoption, the effectiveness of implementing AI technologies into business, the medium- and long-term prospects, etc. We need cooperation at all levels between representatives of government, research institutions, international organisations, business, the academic community and others to find the answers to these questions.

The MGIMO Centre for AI (hereinafter referred to as the "Centre") is a significant platform for research and discussion the questions of global and national markets for digital products and services, humanitarian and civilizational issues of AI development, philosophy of technology, and applied ethics in the field of AI. As part of the Centre's activities, experts:

- carry out international research and expert work on the digital agenda;
- cooperate with international organisations and centres;
- publish analytical works, expert opinions and recommendations on the request of interested government departments, organizations, and companies.

The Centre regularly holds various events as part of its activities in the field of AI. In particular, on December 8-9 2022, a landmark event - the annual international scientific conference AI Global Dimension was held. The key areas of the conference were the sessions devoted to the implementation and use of AI technologies in public administration, business and education.

The opening ceremony was attended by representatives of the Administration of the President of the Russian Federation, and representatives of state organisations and institutions.

At the session "Opportunities and limitations of soft regulation in the field of AI", the speakers discussed:

- how soft regulation in the digital sphere is evolving;
- the current status and prospects of ethical regulation of AI in Russia and abroad;
- the importance of the national AI Ethics Code and its development;
- possibilities for adapting foreign experience on AI ethics.

S. Nakvasin, the Director of the National AI Development Centre under the Government of the Russian Federation, spoke about the practical results of AI implementing in business and practice in the Russian Federation. Since the end of 2020, the Ministry of Economic Development, the Ministry of Digital Development, Communications and Mass Media, participants of the federal project "AI" and other federal executive bodies had been preparing the infrastructure, launched educational programmes for children and adults, formed a line of financial support tools, expanded the programme of scientific development in AI. For example, in 2021 the Government selected six AI research centres, which received grant support from Government and private investors on the national project "Digital economy". Also there are about 40 universities and scientific organizations which work with AI. A work in the area of regulation has been launched two years ago. The issue of soft regulation can't be considered separate from legislation. The rapporteur noted progress in the implementation of pilot regulatory regimes that allow the introduction of AI in certain territories in certain activities., The issue of developing soft ethical regulation in the field of AI becomes important in the context of regulatory development. To date, the AI Ethics Code has more than 130 signatories, that is an important indicator for market participants. The expert stressed

that a large number of federal executive bodies have sent documents to the Ministry of Economic Development to join the Code. Such actions by regulators can serve as an example for organisations that are subordinated to them.

E. Suragina, the Head of the MTS Ecosystem Regulatory Support Unit, highlighted the work on the implementation of the AI Ethics Code. The speaker formulated three main functions of codes of ethics:

1. ethical regulation allows to balance the legal regulation for developers;
2. code of ethics allows to form a digital trust environment;
3. Developers will be protected in certain ethical decisions that based on the code they make.

The expert described the progress of work on the Code. At the beginning of 2021, the draft of the Code was discussed by experts on the platforms of the Federation Council of the Federal Assembly of the Russian Federation, the Public Chamber of the Russian Federation, ANO Digital Economy, the Analytical Centre under the Russian Government. In October 2021 the Code was signed by 18 organizations and academic institutions, and after that new participants continue joining the Code (there is 181 signatories in may 2023).

In June 2022, the Commission for the Implementation the AI Ethics Code began its work. Its goal is the operational management and approval of the top-level documents. Structurally, the Commission consists of a chairperson, working groups' leaders, commissioners and non-signatory external observers.

The Commission includes 4 working groups:

1. WG on development and monitoring a methodology for assessing the risks and humanitarian impact of AI systems. It develops methodological guidance based on global best practice in AI ethics;
2. WG on establishing a set of best practices to address emerging ethical issues in the AI life cycle. It collects, analyses best practices and decides whether they should be included in the set;
3. WG on assessment the effectiveness of the Code implementation. It develops guidance materials and criteria to assess the compliance of acceded actors with the Code and assess the compliance of acceded actors with the requirements of the Code;
4. WG on work with referral services. It develops recommendations for the use of referral services for all interested industries (news aggregators, social networks, audio and video hosting, marketplaces).

The expert noted that promotion of the Code among government representatives, academics, businesses, and users is important for expert community.

The First Secretary of the Department of Information and Press of the Ministry of Foreign Affairs of the Russian Federation A. Sazhinov (note – expert's opinion is not regarded as an official position of the Ministry of Foreign Affairs of the Russian Federation) noted that the situation regarding international regulation in the field of AI is characterized by the absence of hard law instruments in AI and the presence of various soft law instruments. These tools are UNESCO Recommendation on the Ethics of AI

(2021), recommendation documents on the development and use of AI by the OECD and the Global Partnership on Artificial Intelligence. The European Union is developing a regulation establishing harmonized rules in the field of AI, and the Council of Europe is developing a convention. These documents will allow to regulate AI issues with a view to legislating on them. It can be expected that the Convention of Council of Europe will not contradict the Regulation of the European Union, on the one hand, and on the other hand it can be used to promote the regulation in international fora to include non-EU countries.

The AI Ethics Code developed in the Russian Federation should be promoted on international platforms, so that domestic developments on AI ethics regulation are voiced abroad and contribute to the Code's adoption by foreign players from the Asia-Pacific region, Africa and Latin America. Such interaction will contribute to strengthen international relations and expand the presence of Russian organizations in foreign markets. The promotion of the Code in foreign countries will enable further work at the intergovernmental level to promote and conclude documents regulating and ensuring mutual access to relevant markets and to personal data.

V. Gluschenko, the Director of the Centre for Global IT Cooperation, described how the IGF's agenda on AI development is shaping up. The expert cited facts from international practice that show the importance of AI development in different countries (China, the US, the UK and the European Union).

The Internet Governance Forum (hereinafter referred to as "IGF") is the most important international platform where experts discuss development of AI. In 2022, the key theme of the forum was the Global Digital Compact (hereinafter referred to as "GDC") and proposals for its formation. The GDC is an initiative of the UN Secretary-General that was first mentioned by A. Guterres' "Our Common Agenda" report. It is expected to "outline shared principles for an open, free and secure digital future for all"[1]. The GDC is expected to be an instrument of international soft law with a set of voluntary rules and obligations. Six key areas are outlined: a renewed commitment to overcome the digital divide in the world, preventing the fragmentation of the Internet, respecting human rights online, giving users options to manage their data, ensuring trust in the Internet by introducing liability criteria for discrimination and the distribution of misleading content, and digital resources as a global public good.

The topic of advanced technologies, including AI, was one of the key topics at IGF. Experts discussed the concept of trusted AI, approaches to risk management, and the need to develop national regulation. Also there was proposed a universal map for assessing AI technologies at various levels. It will make it possible to identify areas of responsibility between the developer and the state. The discussion led to the drafting of the outcome document "Addis Ababa IGF Messages" [2] (which has a recommendatory nature), with a separate section devoted to AI.

At the session "New Vectors of Digital Business Development - Opportunities for Adaptation", the speakers discussed digital business development.

A. Mikhailov, the Commercial Director of Storm, spoke about the companies' tools and support measures for development institutions, about the barriers, and the possibilities for overcoming. Among the tools, the speaker highlighted the acceleration programme of the Moscow Agency of Innovations because this project is one of the most effective and progressive initiatives for business, adapted for the current realities.

Among the barriers faced by a company during the start-up and commercialisation phase of its operations, the speaker singled out:

1) Separation of acceleration programmes and grant support. Expert supposes that grant and acceleration programmes should be combined into a single structure. Today, after completing an acceleration programme, a startup needs to apply to other agencies in order to receive further grant support, which takes a lot of time. Combining the programs will allow a business/startup/technology company to reduce the time to obtain a grant. In this case simplified grant receipt will be possible upon successful completion of the acceleration program;

2) Weak grant support for projects in the early development stage from idea to commercialisation, and a large number of conditions and restrictions for obtaining it. Increased support could serve as a driver for technology growth.

D. Gorchakova, the Project Manager for the Development of Digital Services of the Russian Export Centre JSC, highlighted the activities of the Russian Export Centre's services to automate digital trade through the creation of a digital platform. The Russian Export Centre's experts have created an ecosystem for reaching exports through online channels. The created ecosystem, My Export Digital Platform, acts as a foreign trade assistant for the entrepreneur. There are collected various measures of state support for export activities. Services on a paid and free-of-charge basis can be obtained by any entrepreneur. The eco-system is designed as a platform to showcase one's products online in international markets.

O. Piven, the CEO of RTVI Media Group, spoke about new vectors of digital business development and the use of metaverses in the work of the media sphere. RTVI explores the topic of new distribution channels for expanding the audience and offering them relevant products. One of the tools of the media sphere is the use of metaverse, which is "a convergence of physical, augmented and virtual reality in a shared online space"[3]. The key players of using metaverses in the media space Netfix, Amazon, Microsoft, Apple, Samsung, Nike, Disney create projects, products, buy spaces, build shops and storefronts. RTVI has created the first media representation in the Decentraland metaverse, one of the largest virtual reality platforms powered by Etherium blockchain. RTVI also uses Midjourney neural network as one of the tools to create images from text descriptions of news headlines. The New York Times, Time magazine, Subbota channel, Radio Maximum and L'Officiel magazine are also among the media cases in the metaverse.

O. Kichaeva, the Head of External Communications of the Department for Entrepreneurship and Innovative Development of Moscow, told about using neural networks as a tool by journalists and editorial staff to create and produce materials and

full-fledged media. Thus, Forbes used a neural network to compose materials, and The Guardian published an AI-generated interview with M. Zuckerberg (M. Zuckerberg refused to give an interview, so The Guardian staff interviewed Zukerbot).

The expert also highlighted several activities of the Department of Entrepreneurship and Innovative Development of Moscow, which include:

- Implementation of programmes aimed at supporting the development of start-ups and technology companies;
- Supporting pilot testing of innovative solutions in real or near real-world conditions;
- Consultancy support in preparing and reviewing documents for obtaining technopark status;
- The work of the ANO Creative Industries Agency, which supports the capital's creative entrepreneurs;
- Development of exports, in particular through the creation of the Moscow Export Centre and the implementation of acceleration programmes for export-oriented entrepreneurs in Moscow.

L. Gontar, the Head of Competence Center for Digitalization of Business Processes at FRCE, the Head of GR Direction at Synergy Corporation, and V.Logushina, an Expert at Skolkovo WG, Lawyer at VTB PJSC presented cases of implementation of AI in digital energy and covered risk factors and development strategies. The experts focused on the development of digital power plants, a prototype of a power plant that operates on the basis of AI. The experts noted that the establishment of interdisciplinary teams is required to address the emerging risks. Promising areas of work for the teams are the functioning of AI and the development of standards for AI operation in the field of data collection and processing.

At the session "Technological Innovations in the Higher Education Process", speakers discussed the transformation of the educational process through the implementation of digital technologies and AI technologies and ways of developing the higher education system in the context of technology.

M. Fedorov, Corresponding Member of the Russian Academy of Sciences, Professor, Doctor of Chemical Sciences, Rector of NTU Sirius, spoke about the role of AI in education in the context of digital transformation. Education is facing several global challenges: the acceleration of technology development and the difficulty of combining active research and teaching, which causes a dialectical contradiction.

The forced experience with digital tools in relation to the pandemic has shown that digital tools still have a limited range of applicability in education. This shows us that the role of the teacher and the educator - the human being in the educational process - is primary, and everything else is a tool that can be useful, although many tools based on AI and big data are well established. This raises a second problem related to discrimination, both to the lack of access to new educational technologies by participants in the educational process, and to conscious or unconscious discrimination against participants in the educational process. Discrimination of participants in the

educational process is manifested in the fact that many tools are based on machine learning and big data, and they somehow evaluate the effectiveness of certain methods, student or pupil perception of the material, etc. There is a possibility that some of the evaluations will not be transparent and individual educational trajectories will be built with discrimination against the student.

Sirius University has developed an approach - a combination of classical education (the core of fundamental knowledge) and a fast-changing shell (current trends and technologies).

E. Alexeeva, PhD in Philosophy, Associate Professor at the Faculty of Philosophy, GAUGN raised the question "Is an artificial teacher possible?". E. Alekseeva has a number of publications on the use of intelligent systems in education, namely "Is Artificial Teacher Possible?" (2020), "Artificial Teacher: Subjectivity or Agency" (2020)

An artificial teacher is an artificial intelligent system programmed to interact with a learner and to simulate the process of learning dialogue in the format of a chatbot, avatar, robot. The aim of introducing such systems is to individualise the learning process by adapting it to the individual cognitive characteristics, needs and goals of students. There have been several attempts to show that an intelligent system can be anthropomorphic and can replace a teacher not only functionally, but also visually. These include the 'talking head' format robot genoid Bina 48, the New Zealand teacher Will in 'avatar' format on a computer screen, the chatbot Jill Watson. This raises the question: can systems replace the teacher or do systems function together with the teacher and perform certain functions? The answer depends on the learning paradigm: information-cognitive or humanistic. The most efficient approach is when systems are given a certain functionality (e.g., automation of the administrative processes of the teacher). In this case, the system will act as an artificial tutor and the teaching activity will be handled by a human tutor.

O. Gurov, PhD in Philosophy, Associate Professor of the Faculty of Economics at Lomonosov Moscow State University, General Director of the ANO "Centre for the Development of Business Competencies" spoke about metaverses in education. O. Gurov has several publications on digital technologies and AI in education, namely Individual Educational Trajectory (IET) and AI: opportunities and challenges of new cognitive processes (2020), Digital technologies in continuing education: challenges and prospects (2021), etc.

The sphere of learning and education has been experienced the changes in this century. In the coming years, the educational system will change even more as part of the development of metaverses. An important concept in relation to the development of technology is the democratisation of technology - the opportunities that digital technology offers to bridge gaps, challenges, create inclusion, equity, equal opportunities, etc.

The last 25-30 years have seen two phases of digital transformation of the education system in the context of technological development. By the end of the twentieth century, e-learning technologies had taken shape, and in the last ten years the Internet

has developed. At this stage, microlearning emerged occurred as a qualitative change. The third stage of digital transformation of the education system is the use of metaverses. A metaverse in education facilitates immersive learning and social interaction in a virtual campus format. The metaverse can act as a space for improving real-world skills in a hybrid space: there is an opportunity for experience-based learning, an unlimited number of attempts, and the exploration of different options. Metaverses make it possible to democratize society technologically precisely in terms of learning, which has always been the main criterion for society and human development.

S. Sergeev, Doctor of Psychology, Professor at SPbSU talked about subjective reality and consciousness in learning systems and environments. S. Sergeev has a number of publications on learning, namely "Distance Learning: Pro et contra" (2021), "Components of the TechnoMind: Artificial Consciousness" (2023) and others.

Consciousness plays a dual role in learning. It is the source of constraints on new information, leading to an objectively contradictory and subjectively non-contradictory picture of the world that is distorted by the current repertoire of knowledge.

Methodologically, e-learning shows that the educational environment acts as a condition for the personal growth of the learner and learning acts as a process of shaping the professional's personality and its tools of activity.

The speaker lists promising e-learning technologies as:

- Self-organising network selective structures;
- Language-based systems (coding, counteracting);
- Systems with multi-media self-organised learning environments;
- Mutually oriented systems;
- Systems with hybrid self-organisation based on competing coborg structures;
- Systems with controlled social self-organisation;
- Hybrid ergotechnical inter-subject environments and systems;
- Creating structures of multi-level network self-organisation.

The final event of the AI Global Dimension was the AI Showcase competition for student technology projects. As part of the competition, participants presented projects to improve the University by introducing digital technologies into work and learning processes. The best projects were devoted to options of MGIMO digitalization - creation of mobile applications, chatbots and networking platforms to optimize the educational process and communication between students. The competition jury appreciated the ideas presented and gave personal recommendations for further development to all the contestants. Some of the projects have already been tested. The conference resulted in a decision to hold a number of joint events in 2023.

References

1. Global Digital Compact // Office of the Secretary-General's Envoy on Technology - 2023. URL: https://www.un.org/techenvoy/ru/global-digital-compact

2. Addis Ababa IGF Messages // Internet Governance Forum 2022// - 2022. URL: https://www.intgovforum.org/en/filedepot_download/249/24066

3. Daria Maslenko. What is the meta-universe and why is everyone talking about it // RBC Trends. – 2022. URL: https://trends.rbc.ru/trends/industry/61449fa89a7947159f1df418